The Analysis of Coupled Surface-Acoustic-Wave Resonator Filters Using COM Modeling Theory And Its Applications

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ABSTRACT

The surface acoustic wave (SAW) resonator filters consisting of a pair of a pair of interdigital-electrode transducers can generate and transmit acou-stic waves. By inserting a grating, we can improve the frequency responseand insertion loss, so approiate design of the delay-line will be very imp-ortant. In this research, we used the COM theory to model the frequency re- sponse of the SAW device and discuss the influence of the delay-line on the frequency response. We found the optimum delay-line distance and the corre-sponding insertion loss is pretty small, which will be very helpful in des-igning corresponding SAW coupled resonator filters.

Keywords : 表面聲波 ; 耦合理論 ; 延遲距離 ; 金屬電極 ; 金屬柵欄

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